Complete Summary

GUIDELINE TITLE

Public health guidance for community-level preparedness and response to severe acute respiratory syndrome (SARS). Version 2. Supplement D. community containment measures, including non-hospital isolation and quarantine.

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention (CDC). Public health guidance for community-level preparedness and response to severe acute respiratory syndrome (SARS). Version 2. Supplement D: community containment measures, including non-hospital isolation and quarantine. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Jan 8. 38 p.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Severe acute respiratory syndrome (SARS)

GUIDELINE CATEGORY

Management
Prevention

CLINICAL SPECIALTY

Family Practice
Infectious Diseases
Internal Medicine
Preventive Medicine

INTENDED USERS

Health Care Providers
Hospitals
Public Health Departments

GUIDELINE OBJECTIVE(S)

To prevent transmission of the severe acute respiratory syndrome-associated coronavirus (SARS-CoV) through use of a range of community containment strategies chosen to provide maximum efficacy based on the characteristics of the outbreak while minimizing the adverse impact on personal liberties

TARGET POPULATION

- Persons with severe acute respiratory syndrome (SARS)
- Persons with SARS reports under investigation
- Contacts of persons with SARS including close, household and community contacts

INTERVENTIONS AND PRACTICES CONSIDERED

1. Isolation of patients with severe acute respiratory syndrome (SARS) at home, in alternative facilities, or in a hospital
2. Management of contacts of SARS cases
    - Passive monitoring
    - Active monitoring without explicit activity restrictions
    - Active monitoring with activity restrictions (quarantine)
    - Working quarantine
    - Focused measures to increase social distance, such as:
        - Closure of schools or office buildings
        - Suspension of public markets
    - Community-wide measures to increase social distance, such as:
        - Community-wide "snow day"
        - Scaling back mass transportation
        - Closure of bridges and tunnels
        - Closure of schools and work sites
    - Widespread community quarantine
        - Quarantine of a city or town
        - Quarantine of occupants of a housing complex or office building

MAJOR OUTCOMES CONSIDERED

The impact and effectiveness of individual isolation and quarantine measures and community- and population-level interventions undertaken to contain the 2003 severe acute respiratory syndrome (SARS) epidemic globally

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The guideline was prepared by the Centers for Disease Control and Prevention's (CDC) Severe Acute Respiratory Syndrome (SARS) Preparedness Committee, which was assembled to prepare for the possibility of future SARS outbreaks. The Committee includes eight working groups, each of which addressed a component of SARS preparedness and response. The working groups derived the guidance document from lessons learned during the 2003 epidemic, other CDC preparedness and response plans, and the advice, suggestions, and comments of state and local health officials and representatives of professional organizations, convened by means of teleconferences and meetings. Meetings were held on August 12-13, 2003 (public health preparedness and response), September 12, 2003 (preparedness in healthcare facilities), and September 18, 2003 (laboratory diagnostics).

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This is an updated version of the draft guidance document issued by the Centers for Disease Control and Prevention (CDC) on November 3, 2003. CDC revised the draft based on comments received from public health partners, healthcare providers, professional organizations, and others.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Priority Activities

- Identify, evaluate, and monitor contacts of severe acute respiratory syndrome (SARS) patients, and consider quarantine of contacts if needed.
- Continually monitor the course and extent of the outbreak, and evaluate the need for community containment measures.
- Establish the infrastructure to deliver essential goods and services to persons in quarantine and isolation.
- Develop tools and mechanisms to prevent stigmatization and provide mental health resources for those in isolation and quarantine.
- Work with community partners to ensure that implementation and communication plans address the cultural and linguistic needs of affected persons.

Management of SARS Patients in Isolation

Preventing transmission from SARS patients is critical to controlling SARS. This requires limiting the public interactions of possible or known SARS patients (e.g., at work, school, or out-of-home child care) and preventing transmission wherever the patients are housed during the period of infectivity (10 days after the resolution of fever, provided respiratory symptoms are absent or improving).

SARS patients should be isolated in a hospital only if medically necessary. Local and state authorities should also be prepared to isolate patients at home or in alternative facilities designated for this purpose. SARS preparedness planning must address home isolation of SARS patients, the availability and use of existing or temporary structures as alternative facilities for isolation, the management of patients housed at home or in alternative facilities, and resources for supplies and services.

Objective: Separate and confine patients who meet the case definition for probable or confirmed SARS-CoV disease or SARS report under investigation (RUI) during the period of communicability (see the National Guideline

Clearinghouse [NGC] guideline summary Supplement B: SARS Surveillance, Appendix B1).

Activities aimed at separating persons with known or possible SARS-CoV disease should be modulated as needed based on the status of the outbreak. Basic activities should be initiated with the identification of the first confirmed or probable case or SARS RUI. Enhanced activities may become necessary as an outbreak evolves and the number of persons requiring isolation increases.

Basic Activities

- SARS patients should be admitted to a healthcare facility for isolation only if clinically indicated or if isolation at home or in a community facility cannot be achieved safely and effectively. Isolation of SARS patients in hospitals is described in detail in the NGC guideline summary Supplement C: Preparedness and Response in Healthcare Facilities.
- Before a SARS patient is placed in a residence or community facility for isolation, arrangements should be made to ensure that the residence has the features necessary for provision of appropriate care to the patient and to determine if sufficient infection control measures can be established to prevent/limit exposures to household members, other primary caregivers, and the community. Guidelines on evaluation of residences for isolation are provided in Appendix D3 in the original guideline document and in the NGC guideline summary Supplement I: Infection Control in Healthcare, Home, and Community Settings.
- During the period of home isolation, household members not providing care should be relocated if possible so that only the primary caregiver and the patient remain in the residence. If household members cannot be relocated, they should minimize their contact with the SARS patient. Persons at risk for serious SARS complications (e.g., persons with underlying heart or lung disease, persons with diabetes mellitus, and elderly persons) should not have contact with the patient.
- The SARS patient in home isolation and all persons in contact with the patient should follow the infection control recommendations described in the NGC guideline summary Supplement I: Infection Control in Healthcare, Home, and Community Settings.
- Close contacts of SARS patients should be vigilant for fever (i.e., measure temperature twice daily), respiratory symptoms, and other symptoms of early SARS-CoV disease, such as chills, rigors, myalgia, headache, or diarrhea. If symptoms develop, the designated health department should be contacted to arrange for immediate medical evaluation and follow-up.

Enhanced Activities

If a surge in patients overwhelms healthcare capacity or if home isolation is not feasible, health departments may need to use alternative facilities for isolation of SARS patients. Additional information on community isolation of SARS patients is provided in Appendix D3 in the original guideline document and in the NGC guideline summary Supplement I: Infection Control in Healthcare, Home, and Community Settings.

Management of Contacts of SARS Cases

Objective 1: Monitor and evaluate contacts of SARS patients (probable and confirmed cases of SARS-CoV disease and SARS RUIs) to ensure early identification of illness and rapid institution of infection control precautions to prevent further spread (See the NGC guideline summary Supplement B: SARS Surveillance, Appendix B1).

Basic Activities: Passive or Active Monitoring

- In a limited SARS outbreak, contacts of SARS patients may be managed by using passive or active monitoring. Monitoring consists of direct contact--by phone or in person--with the health department or a designee at least once a day to assess the affected person for symptoms and address any needs. Frequent monitoring (e.g., twice a day) can reduce the interval between the onset of symptoms and the institution of precautions. Passive monitoring relies on the affected person to contact health authorities if symptoms develop. Active monitoring involves direct assessment of each contact at least once a day by a designee of the health department.

  Persons with high-risk exposures (e.g., healthcare workers involved in aerosol-generating procedures on a SARS patient) may require activity restrictions in addition to monitoring (see "Enhanced Activities" below).

- Regardless of the type of monitoring recommended, all contacts of SARS cases should be advised to:
  - Be vigilant for fever (i.e., measure temperature twice a day), respiratory symptoms, and other symptoms of early SARS-CoV illness for 10 days after exposure (See Supplement B: SARS Surveillance, Appendix B1).
  - If symptoms develop, contact a designated health department staff member so that clinical evaluation can be performed without delay.
  - Before visiting a healthcare facility for evaluation, inform the healthcare provider in advance about the possible exposure to SARS-CoV.

Enhanced Activities: Quarantine of Contacts

During a large outbreak or in situations of high-risk exposures (e.g., if transmission from a particular case has been demonstrated by emergence of secondary cases among one or more contacts), consideration should be given to managing contacts with activity restrictions in addition to active monitoring. This combined approach is referred to as quarantine. The purpose of quarantine is to reduce transmission by 1) separating contacts of SARS patients from others, 2) monitoring contacts for symptoms, and 3) instituting appropriate infection control precautions as soon as symptoms are detected.

Implementation of quarantine for contacts can be complicated and resource intensive, and the activity restrictions can be difficult for affected persons to endure. In deciding when to use quarantine and which persons should be included in a quarantine order, public health officials must strike a balance based on the epidemiologic situation and available resources. Limiting quarantine to only high-risk contacts may be more labor intensive at the outset but will be easier to maintain since fewer resources will be needed for provision of services and

enforcement of restrictions. Applying quarantine too narrowly in the midst of an extensive outbreak can, however, blunt the efficacy of the policy if missed cases result in additional generations of transmission. If the resources required for investigation and risk stratification of contacts are not available, broader application of quarantine may be more practical. Whenever quarantine is implemented, close clinical monitoring and provision of essential services and needs must be ensured.

- Based on the situation, select among the three main options for quarantine of contacts: home quarantine, quarantine in designated facilities, and working quarantine.

  Home quarantine: Home quarantine is most suitable for contacts with a home environment that can meet their basic needs and in which unexposed household members can be protected from exposure.

  - Persons in home quarantine must be able to monitor their own symptoms (or have them monitored by a caregiver).
  - As is the case for isolation, a home should be evaluated for suitability before being used for quarantine. Because the infection control requirements for healthy contacts in quarantine are less stringent than those for ill persons in isolation, this evaluation may be performed by use of a questionnaire administered to the quarantined person or the caregiver. Additional guidance on use of a residence for quarantine is provided in Appendix D3 in the original guideline document and Supplement I: Infection Control in Healthcare, Home, and Community Settings.
  - Household members require no specific precautions as long as the quarantined person remains asymptomatic. However, because the onset of symptoms can be insidious, it may be prudent for the quarantined contact to minimize interactions with other household members to prevent exposure during the interval between the development and the recognition of symptoms. Precautions might include 1) sleeping and eating in a separate room, 2) using a separate bathroom, and 3) wearing a surgical mask when in a room with others.
  - Persons in quarantine may be assessed for symptoms by either active or passive monitoring. Delayed recognition of symptoms and a resulting delay in the institution of isolation contributed to extensive chains of transmission in several areas during the 2003 SARS outbreaks, even when the areas were under heightened surveillance. Active monitoring of contacts in quarantine might overcome any delays resulting from the insidious onset of symptoms or denial among those in quarantine.
  - Persons who develop symptoms should immediately notify the designated health department to arrange for medical evaluation. The health department should provide explicit instructions for isolation and other infection control precautions to be observed in the home while the ill person is awaiting evaluation. At minimum, persons with symptoms should be separated from others in the household.
  - Household members may go to school, work, and so on, without restrictions unless the quarantined person develops symptoms. If the quarantined person develops symptoms, household members should

remain at home in a room separate from the symptomatic person and await additional instructions from health authorities.
    - Household members can provide valuable support to quarantined persons by helping them feel less isolated and ensuring that essential needs are met.

Quarantine in designated facilities: Contacts who do not have an appropriate home environment for quarantine or who choose not to be quarantined at home may be quarantined in facilities designated for this purpose. Facilities designated for quarantine of persons who cannot or choose not to be quarantined at home should meet the same criteria listed for home quarantine. Evaluation of potential sites for facility-based quarantine is an important part of preparedness planning. Additional guidance on use of a residence for quarantine is provided in Appendix D3 in the original guideline document and the NGC guideline summary Supplement I: Infection Control in Healthcare, Home, and Community Settings.

Working quarantine: This restriction applies to healthcare workers or other essential personnel who have been exposed to SARS patients and may need to continue working (with appropriate infection control precautions) but who are quarantined either at home or in a designated facility during off-duty hours (See the NGC guideline summary Supplement C: Preparedness and Response in Healthcare Facilities). When off duty, contacts on working quarantine should be managed in the same way as persons in quarantine at home or in a designated facility. Local officials will also need to develop:

    - Systems for monitoring persons in working quarantine for symptoms during work shifts
    - Mechanisms for immediate medical evaluation of anyone who develops symptoms
    - Provisions for transportation to and from work, if needed
- The recommended duration of quarantine for SARS is generally 10 days from the time of exposure. During that period, contacts should be monitored at least daily for fever and respiratory symptoms. In addition, health officials should provide the necessary support to enable contacts to comply with quarantine appropriately. Recommendations for monitoring of contacts include the following:
    - Monitor daily, or more frequently if feasible, for fever, respiratory symptoms, and other symptoms of early SARS-CoV disease.
    - Monitor compliance with quarantine through daily visits or telephone calls.
    - Provide a hotline number for quarantined persons to call if they develop symptoms or have other immediate needs.
    - If a quarantined person develops symptoms suggestive of SARS, arrangements should be in place for immediate medical evaluation of the patient. The health department should provide explicit instructions on the isolation and infection control precautions to be observed while the ill person is awaiting evaluation. At a minimum, symptomatic persons should be isolated from others in a separate room.
    - Provide persons in quarantine with all needed support services, including 1) psychological support, 2) food, 3) household and medical

supplies, and 4) care for family members. Financial issues, such as medical leave, may also need to be considered.

- At the end of the designated quarantine period, contacts should have a final assessment for fever and respiratory symptoms. Persons without fever or respiratory symptoms may return to normal activities.

Objective 2: Compile and analyze the information on contacts needed to evaluate and monitor the effectiveness of contact management strategies and containment interventions.

Contact tracing and monitoring require substantial data management resources. The information technology needs for timely surveillance, monitoring, and management of contacts of SARS cases are currently under discussion among CDC and partners in state and local health departments, and development of a contact tracing and monitoring database is under way.

Basic Activities

- Public health officials responsible for contact tracing and management of contacts should compile and analyze information collected from contacts during the investigation and in the course of monitoring to evaluate the effectiveness of control measures. These data will inform decision making about the need for more stringent measures such as quarantine. Information should be collected for contacts of all SARS cases to determine the following:
    - Number of contacts identified per case
    - Number of days between onset of symptoms and reporting to health officials and between reporting and isolation
    - Number of cases occurring with unknown exposure

Enhanced Activities

If quarantine is implemented, information gathered during the investigation and monitoring of contacts should be analyzed on an ongoing basis to evaluate the effectiveness of the intervention. This information will be critical in determining the need for broader application of quarantine and the timing of withdrawal of containment measures. In addition to the parameters listed above, which should be determined for contacts of all SARS cases, the proportion of contacts in quarantine (by risk group) who develop SARS-CoV disease should be determined.

Community-Based Control Measures

Whereas decisions on use of containment measures in individual situations depend primarily on the characteristics of the exposure and the affected contact, the decision to institute broader use of community measures is more complex. The different options (e.g., active monitoring with voluntary activity restrictions, legally mandated quarantine, and institution of snow days) will vary in their effectiveness in controlling the outbreak and their impact on personal liberties. Other measures that might prevent inadvertent SARS-CoV exposures (e.g., temperature monitoring in public places and use of masks) should also be considered. Decisions should be based primarily on the epidemiologic characteristics of the outbreak. Other considerations will include the healthcare

and public health resources available and the level of community cooperation (see Appendix D4 in the original guideline document).

Local officials will face enormous logistic, economic, ethical, and psychological challenges in implementing community-level containment measures. Preparedness planning should include development of essential partnerships to address: 1) provision of essential services and support (e.g., food, household and medical supplies, medical attention, caretaking, continuation of work/school via telecommuting or home-based curricula, and financial support), 2) mental health (e.g., stigma management and prevention, and psychological support), and 3) enforcement (e.g., controlling entry into and exit from narrowly defined geographic areas, border surveillance/monitoring, and travel permits and credentials).

Even with the most comprehensive planning, however, officials must be prepared to make decisions on the basis of incomplete or inadequate information and to modify strategies as the situation unfolds. Although control measures should never be used indiscriminately or in a manner out of proportion to the situation, undue caution should not inhibit the bold and swift implementation of the interventions upon which effective control depends.

Objective 1: Reduce the risk of transmission of SARS-CoV at the community level by implementing large-scale measures that limit social interactions and prevent inadvertent exposures.

Activities

- Implement community containment measures based on the epidemiologic characteristics of the outbreak, according to the graded response outlined below.
- In the absence of SARS-CoV transmission in the world, activities should focus on preparedness, planning, and surveillance for the first case(s). Public health and healthcare officials should provide community members with information about SARS and promote hand hygiene and respiratory hygiene/cough etiquette (See the NGC guideline summary Supplement C: Preparedness and Response in Healthcare Facilities).

Level of SARS Activity	Response
No SARS-CoV transmission globally	Preparedness planning
SARS-CoV transmission in the world, but all cases locally are either imported or have an identifiable epidemiologic link to other cases at the time of initial evaluation	Passive or active surveillance/monitoring of contacts
SARS activity in the area, with either a small number of cases in persons without an identifiable epidemiologic link at the time of initial evaluation or increased occurrence of SARS among known contacts	Quarantine of close contacts
SARS activity in the area, with a large number of cases in persons without an identifiable epidemiologic link at the time of initial	Focused measures to increase social distance; consider community-level measures to

Level of SARS Activity	Response
evaluation; control measures are believed to be effective	increase social distance
SARS activity in the area, with a large number of cases in persons without an identifiable epidemiologic link at the time of initial evaluation; control measures are believed to be ineffective	Community-level measures to increase social distance; consider community-wide quarantine
Decreases in the number of new cases, unlinked (or "unexpected") cases, and generations of transmission	Quarantine of contacts
Transmission has been controlled/eliminated; no new cases reported	Active monitoring in high-risk populations; continue for 2-3 incubation periods after control or elimination of transmission.

- If SARS-CoV transmission is occurring in the world but the United States is reporting only a few imported cases and no or limited local transmission from those cases, then officials in areas with SARS cases should consider passive (at minimum) or active monitoring of close contacts. Although active monitoring promotes early identification of non-specific or insidious symptoms and reliable assessment of fever and symptoms, it also requires substantial resources. Local conditions therefore may dictate at least initial use of passive monitoring, particularly in the management of contacts with lower-risk exposures. For persons with high-risk exposures (e.g., healthcare workers with unprotected exposure to a SARS case, especially during a high-risk procedure), home quarantine with either passive or active monitoring may be considered.
- Jurisdictions should consider more restrictive measures for any of the following situations:
    - Identification of cases without known epidemiologic links (i.e., cases occurring in persons who, at the time of diagnosis, are not known to have had contact with a known SARS case or exposure to a known transmission setting)
    - Increasing number of cases among contacts of SARS patients
    - Significant interval between the onset of symptoms and the isolation of cases
    - Inadequate resources for continued isolation of cases and tracing and monitoring of contacts

  Measures to be considered include quarantine of close contacts, such as family members or healthcare workers who provided care to SARS patients. This approach has the advantage of limiting the use of quarantine to those at greatest risk, but implementation requires time, effort, and availability of skilled interviewers.

  Whenever possible, contacts should be quarantined at home. Home quarantine requires the fewest additional resources, although arrangements must still be made for monitoring patients, reporting symptoms, transporting patients for medical evaluation, and providing essential supplies and services.

In some cases, affected persons may not have access to an appropriate home environment for quarantine. Examples include travelers; persons living in dormitories, homeless shelters, or other group facilities; and persons whose homes do not meet the minimum requirements for quarantine. In other instances, contacts may have an appropriate home environment but may not wish to put family members at risk. In these situations, health officials should identify a facility with the appropriate characteristics for quarantine of contacts. Monitoring may be either passive or active, although active monitoring may more appropriate in a facility setting.

- Jurisdictions with large numbers of cases without known epidemiologic linkages should consider instituting measures to increase social distance. Identification of an unlinked case can mean either that transmission is occurring from undetected cases or that contact tracing efforts are not identifying all potential contacts. Increasing social distance can reduce the likelihood that unexposed community members will be exposed to SARS-CoV and that persons who have already been exposed will unknowingly transmit to others if they become symptomatic. Interventions to increase social distance are usually applied to groups of persons in settings where there might have been exposure to SARS-CoV (e.g., a school in which several cases of SARS have been diagnosed). In a community with ongoing transmission, these measures may be applied to settings without known exposure (e.g., cancellation of concerts or sporting events, restricted use of public transportation).

  The "snow day" approach may be an effective way to increase social distance and reduce transmission because it is a concept with which most Americans are familiar. This intervention would likely be instituted for an initial 10-day period, with final decisions on duration based on assessment of current epidemiologic information. Other community-level measures, such as community-wide temperature monitoring, temperature screening before entering public buildings, or recommended or mandatory mask use, may also be considered. Although the effectiveness of these interventions has not been quantified, they might enhance public awareness and facilitate early detection of cases.

- In extreme circumstances, when control measures do not appear to be effective or resources are overwhelmed, more restrictive measures such as widespread or community-wide quarantine may be considered.

Objective 2: Scale back community containment measures as soon as appropriate.

Communities may scale back community containment measures as the outbreak comes under control. For example, with significant declines in the number of new cases, unlinked cases, and generations of transmission, the community measures can be halted and efforts can be refocused on quarantine of known contacts.

The process by which community containment measures are lifted requires as much thought and planning as their implementation. When applied to individuals, movement restrictions such as quarantine can be removed as soon as the

exposed contact has remained without signs or symptoms of disease for a complete incubation period for SARS-CoV disease (i.e., 10 days).

A decision to discontinue the broader use of community-level measures is more complex. A decision on the optimal time to remove these measures must balance the need to restore personal liberties against community safety. Premature removal of containment strategies can increase the risk of additional transmission and recurrent outbreaks. Decisions should be based on evidence of improving local/regional control, such as 1) consistent decrease in the number of confirmed cases, 2) reduction in the number of probable and known cases, and 3) confirmation that all cases either were imported or have a known source or well-defined epidemiologic link.

Activities

- When there is reasonable evidence of improved control of the outbreak, discontinue quarantine of contacts of persons meeting the criteria for SARS RUI (see the NGC guideline summary Supplement B: SARS Surveillance). Continue quarantine of contacts of persons with probable or confirmed SARS-CoV disease, particularly those with known exposures or well-defined epidemiologic links.
- When three incubation periods have elapsed since the last reported confirmed case of SARS-CoV disease, discontinue quarantine of contacts. Also discontinue maintenance of designated facilities for quarantine.
- As soon as appropriate, discontinue use of community-level containment measures. Withdraw the most stringent measures (e.g., geographic or population-based movement restrictions, mass transit interruptions, travel restrictions) first. Begin scaling back community-level measures when three incubation periods have elapsed after identification of the last unlinked or probable case of SARS-CoV disease (i.e., all cases are imported or have known exposures or well-defined epidemiologic links).

Enforcement of Community Containment Measures

Data from modeling studies suggest that community containment measures such as quarantine are effective for controlling an outbreak even if compliance is less than perfect. Optimally, quarantine applied on a voluntary basis will afford sufficient compliance to attain the necessary effect. Nevertheless, protocols must be established for enforcement of both individual and community measures when higher levels of compliance are required.

Objective 1: Enforce individual quarantine restrictions as necessary.

Activities

- Develop protocols for follow-up of persons who cannot be reached by telephone. Protocols might include a threshold period for non-responsiveness that should trigger a home visit or other means to locate the person. Partnerships with law enforcement and other community-based resources will be helpful in tracing the whereabouts of persons who have violated restrictions.

- Consider and plan for the use of alternative arrangements for persons who cannot or will not comply with voluntary home quarantine. These might include:
    - Issuing official, legally binding quarantine orders
    - Posting a guard outside the home
    - Using electronic forms of monitoring
    - Using guarded facilities

Objective 2: Enforce community-level containment measures as necessary.

Activities

Enforcement of community-wide containment measures is necessarily more complex given the larger number of persons involved. Although some measures, such as cancellation of public events or scaling back of mass transit services, are self-enforcing, others (e.g., restrictions on travel between areas) may require use of physical measures such as checkpoints. Implementation will require close partnerships and cooperation with law enforcement at the local and state levels. Federal law enforcement resources may also be available in some situations.

Refer to the original guideline document for a discussion on the roles and responsibilities related to community isolation and quarantine.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation. The working groups derived the guidance document from lessons learned during the 2003 epidemic, other Centers for Disease Control and Prevention (CDC) preparedness and response plans, and the advice, suggestions, and comments of state and local health officials and representatives of professional organizations.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Prevention of transmission of severe acute respiratory syndrome-associated coronavirus (SARS-CoV)
- Appropriate use of effective community containment strategies based on characteristics of outbreak
- Minimal adverse impact on personal liberties

POTENTIAL HARMS

- Local officials will face enormous logistic, economic, ethical, and psychological challenges in implementing community-level containment measures. Preparedness planning should include development of essential partnerships to address: 1) provision of essential services and support (e.g., food, household and medical supplies, medical attention, caretaking, continuation of work/school via telecommuting or home-based curricula, and financial support), 2) mental health (e.g., stigma management and prevention and psychological support), and 3) enforcement (e.g., controlling entry into and exit from narrowly defined geographic areas, border surveillance/monitoring, and travel permits and credentials).
- Even with the most comprehensive planning, however, officials must be prepared to make decisions on the basis of incomplete or inadequate information and to modify strategies as the situation unfolds. Although control measures should never be used indiscriminately or in a manner out of proportion to the situation, undue caution should not inhibit the bold and swift implementation of the interventions upon which effective control depends.
- Containment measures, such as quarantine, infringe on personal freedom of movement, and may lead to a feeling of isolation from family and friends and/or to a loss of income or employment.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The appendices in the original guideline document include tools for implementation including:

- Appendix D1: Interventions for community containment
- Appendix D2: Frequently asked questions about use of community containment measures
- Appendix D3: Guidelines for evaluating homes and facilities for isolation and quarantine
- Appendix D4: Threshold determinants for the use of containment measures
- Appendix D5: Preparedness checklist for community containment measures

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention (CDC). Public health guidance for community-level preparedness and response to severe acute respiratory syndrome (SARS). Version 2. Supplement D: community containment measures, including non-hospital isolation and quarantine. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Jan 8. 38 p.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003 Nov 3 (revised 2004 Jan 8)

GUIDELINE DEVELOPER(S)

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Centers for Disease Control and Prevention Severe Acute Respiratory Syndrome (SARS) Preparedness Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version issued by the Centers for Disease Control and Prevention (CDC) on November 13, 2003.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Centers for Disease Control and Prevention (CDC) Web site:

- HTML Format
- Microsoft Word
- Portable Document Format (PDF)

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- In the absence of SARS-CoV transmission worldwide: guidance for surveillance, clinical and laboratory evaluation, and reporting. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Jan 8. 15 p.

  Electronic copies: Available from the CDC Web site.

- Clinical guidance on the identification and evaluation of possible SARS-CoV disease among persons presenting with community-acquired illness. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Jan 8. 15 p.

  Electronic copies: Available from the CDC Web site.

- PowerPoint Slide Set: Quarantine: Community Response and Containment for SARS.

  Electronic copies: Available from the CDC Web site in PDF format and as Microsoft PowerPoint downloads.

See also:

- Appendix D1: Interventions for Community Containment.
- Appendix D2: Frequently Asked Questions about Use of Community Containment Measures.
- Appendix D3: Guidelines for Evaluating Homes and Facilities for Isolation and Quarantine.
- Appendix D4: Threshold Determinants for the Use of Community Containment Measures.
- Appendix D5: Preparedness Checklist for Community Containment Measures.

  Electronic copies: Available from the CDC Web site in PDF format and as Microsoft Word downloads.

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

PATIENT RESOURCES

The following is available:

- Information for SARS Patients and Their Close Contacts. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Feb 6.
- Infection Control Precautions for SARS Patients and Their Close Contacts in Households. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2004 Jan 8.

Electronic copies: Available from the Centers for Disease Control and Prevention (CDC) Web site.

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

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